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# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

November 25, 2015

Karin Madsen, Resident Agent  
Genwal Resources, Inc.  
P.O. Box 910  
East Carbon, Utah 84520-0910

Subject: Completion of Midterm Permit Review, Task ID #5011, Genwal Resources, Inc.,  
Crandall Canyon Mine, C/015/0032.

Dear Ms. Madsen:

On October 1, 2015, Genwal Resources, Inc. was informed that the Division of Oil, Gas and Mining (the Division) had commenced a midterm permit review for the Crandall Canyon Mine.

The midterm review has now been completed and will now be closed; however, the Division has identified deficiencies that must be addressed. The deficiencies have been included with this letter (See Attached). The name of the author for each of the respective deficiencies has been provided.

Your response to these deficiencies will need to be submitted as an amendment to your MRP and will be processed as a separate task. Please submit the required amendment with the accompanying C1 and C2 forms by no later than January 15, 2016.

If you have any questions regarding these requirements or the Midterm Review process, please don't hesitate to call me at 801-538-5350.

Sincerely,

Steve Christensen  
Permit Supervisor

SKC/sqs

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# State of Utah

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## Technical Analysis and Findings

### Utah Coal Regulatory Program

**PID:** C0150032  
**TaskID:** 5011  
**Mine Name:** CRANDALL CANYON MINE  
**Title:** MIDTERM PERMIT REVIEW

## General Contents

### Identification of Interest

#### Deficiencies Details:

R645-301-112: The current mining and reclamation plan (MRP) does not meet the State of Utah R645 requirements for Identification of Interests. The Permittee must revise the first page of Chapter 1. It identifies Intermountain Power Authority (IPA) as a joint owner of the Crandall Canyon Mine. As the first five pages are clearly out of date, the Permittee may choose to delete them as the information is located elsewhere in the current MRP.

schriste

### Violation Information

#### Deficiencies Details:

R645-301-113.300: The current Crandall Canyon MRP does not meet the State of Utah R645 requirements for Violation Information. The Permittee must revise/update the violation information in Appendix 1-11. It appears that the violation information in Appendix 1-11 was last updated in November of 2009.

schriste

### Right of Entry

#### Deficiencies Details:

R645-301-114: The current Crandall Canyon mining and reclamation plan (MRP) does not meet the State of Utah R645 requirements for Right of Entry Information. The Permittee must revise/update the lease information in the MRP. The lease information provided in the Crandall Canyon Mining and Reclamation Plan needs to be revised to reflect the current leases held by the Permittee. Section 114, Right of Entry Information, beginning on page 1-5 as well as the first page (page 1) of Chapter 1 need to be revised/updated. In addition, all maps, figures and plates that depict lease boundaries must be updated.

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### Legal Description

#### Deficiencies Details:

R645-301-112.800, -114: The current Crandall Canyon mining and reclamation plan does not meet the State of Utah R645 requirements for legal description. The Permittee must update the legal description beginning on page 1-7 of the MRP. The current legal description contains leases that the have been relinquished by the Permittee. As such, the Permittee must revise the legal description. The legal description, at a minimum, must include all disturbed (i.e. bonded) areas. If the Permittee chooses to, the legal description can also include those leases that are currently held by the Permittee. However, the State of Utah R645 rules only require that the legal description include areas for which the Division of Oil, Gas and Mining hold a reclamation bond (e.g. East Mountain, Burma Evaporation Basin and Crandall Canyon Mine facility). All plates and figures will also need to be revised to reflect the current permit area.

schriste

## Operation Plan

### Mining Operations and Facilities

#### Deficiencies Details:

R645-301-521. The current MRP does not address changes in the mine boundary due to lease relinquishments. The Permittee needs to update the appropriate drawings in Chapter 5 to reflect current lease areas.

cparker

### Subsidence Control Plan Subsidence

#### Deficiencies Details:

R645-301-525.400. The minimum requirements of R645-301-525.400 are met in the current MRP as the Permittee presented a clear subsidence plan for protected areas, however, subsidence monitoring requirements have been met as of 2014 and annual subsidence monitoring should be removed from the MRP. Section 5.25.14 of Chapter 5 of the MRP states the annual requirement of vertical and horizontal positions of all monitoring points and pins directly over and within the 20 degree angle of draw to the mined area surveyed by aerial photography for that specific year. The subsidence monitoring will be conducted annually until subsidence of less than one foot has been measure for three consecutive surveys showing that subsidence is substantially complete. Plate 5-5 and 5-5 (2) detail the coordinates for all subsidence monitoring locations, including monitoring points over areas where the lease has been relinquished. The Permittee has submitted updated annual subsidence information since 2004 for the South Crandall mine and since 2012 for the East Mountain reclaimed slide area. As of the 2014 subsidence monitoring report, all monitoring points have not recorded any subsidence greater than six inches since 2012. The permittee should amend the MRP to include demonstration of subsidence is substantially complete and will no longer be monitored.

cparker

### Topsoil and Subsoil

#### Deficiencies Details:

##### Deficiency:

R645-301-121.100, Please provide the following current information:

- 1) Operation and reclamation of the Burma pond is described in Chapter 7 Appendices D, Appendix 7-66 (electronic page 242). Chapter 2 of App. 7-66 states that after soil salvage at the Burma pond is completed, a final assessment of the volume will be updated in the MRP and a final report will be prepared and submitted to the Division. The work was completed in 2012. The as-built information could not be found within the MRP or in recent annual reports. Please provide the as-built report.
- 2) Chapter 5 of App 7-66 item 2 states that the accumulated depth of sludge will be monitored and reported in the annual report and that grab samples of the dried material will be taken every five years or with 7.5 inches of solid waste deposited. This information could not be found in recent annual reports. Please provide the required reporting and analyses.
- 3) Provide a reporting of the depth of placement and compaction of sludge. Include sampling information if placement depth met the requirements of App 7-66, Chap 5, item 2.

pburton

### Hydrologic Ground Water Monitoring

#### *Deficiencies Details:*

R645-301-731.210 The Permittee must remove monitoring wells MW-1, MW-2, MW-6, MW-6A, MW-7, MW-8, and DH-1 from the water monitoring plan. These in-mine wells are located in a lease that no longer held by the Permittee.

adaniels

### **Hydrologic Impoundments**

#### *Deficiencies Details:*

R645-301-731.121 Update Appendix 7-66 of the MRP to include the actual operations taking place at the Burma pond, specifically hauling of sludge/water from the water treatment system, instead of estimated operations.

R645-301-731.121 It is unclear how much solid material is accumulating at the Burma pond. The submitted quarterly impoundment inspections indicate that between 2013 and 2014, there was no change in the accumulated material levels. Appendix 7-66 estimates that 1.5 inches of material will be deposited each year (with hauling rates that are much lower than what is actually taking place). This accumulation rate, as well as the estimated life of the Burma pond should be updated to reflect what is currently taking place.

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### **Reclamation Plan**

#### **General Requirements**

#### *Deficiencies Details:*

R645-301-540 . The minimum requirements of R645-301-540 are not met within the current MRP as there is a missing reference to the operations and reclamation of the Burma Evaporation pond and Castle Valley special service district water treatment plant. Appendix 5-22A is the stand alone reclamation plan for the East Mountain Emergency Drillpads and Access Roads and is referenced in Chapter 5 Section 5.40 so that relevant information can be located. The MRP Chapter 5 Section 5.40 is missing information detailing that the operation and reclamation of the Burma Evaporation Pond and Castle Valley special service district water treatment plant to service the mine discharge can be found in Appendix 7-D, App. 7-65 and App.7-66. The Permittee will amend this section to include the relevant directions to additional reclamation plans associated with the Crandall Mining operations.

R645-301-540. The minimum requirements of R645-301-540 are not met within the current MRP as the Burma Evaporation pond and Castle Valley special service district water treatment plant is reaching the end of its bonding agreement. The MRP within Chapter 7 Appendix 7-66 details several various operations and reclamation scenarios, as described in items one through seven on Page 8 of Appendix 7-66. Operations within the Burma Pond Appendix 7-66 need to be updated as detailed in hydrology deficiencies.

cparker

### **Backfill and Grading General**

#### *Deficiencies Details:*

R645-301-553. The minimum requirements of R645-301-553 are not met within the current MRP due to outdated information present in the Appendix 7-65 and 7-66 backfilling cost. During reclamation the subsoils or backfill material will be laid in 12" to 18" lifts and compacted through repeated travel of heavy equipment. In areas with slopes of less than 30% the subsoil will be ripped to a depth of 18" prior to topsoil placement. In areas having an average slope of more than 30% the subsoil will be ripped to a depth over 12". The East Mountain area has been fully back graded and remains stable as detailed in the 2014 Annual report. The Burma Pond and Castle Valley special service district water treatment plant final reclamation needs to be updated to reflect updated operations and life expectancy as addressed in hydrology deficiencies. The Water treatment area does not contemplate the volume required to backfill the current treatment pond shown on Plate 5-3 to achieve AOC shown on plate 5-17. Volumes of the loadout area need to be updated.

cparker

### **Stabilization of Surface Areas**

*Deficiencies Details:*

R645-301-244.100 and R645-301-121.100,

1) Please provide documentation (narrative and map) of the interim reclamation measures taken on disturbed areas which are not required for continuing operations, along with control of noxious weeds in accordance with Article 10.2 of SITLA Lease 1708 (App. 1-16) and App 7-66, Chapter 5, Item 6, page 9 and item 9 page 10.

2) To ensure permit renewal is processed in a timely manner please revise the timing of the evaluation described in App. 7-66, Chapter 5 item 5 and item 6, page 8 (electronic page 250) to the mid-term permit review and please provide said evaluation in response to this mid-term review.

pburton

**Bonding Determination of Amount**

*Deficiencies Details:*

R645-301-830.140. The application does not meet the minimum requirements of R645-301-830.140 as the Permittee did not submit detailed bond information. The Division requires an evaluation of the reclamation cost estimate during each midterm permit review. This cost estimate is then escalated for five years or until the next midterm review. In accordance with the requirements of R645-301-830, and -301-830.140, it is the Permittees responsibility to provide detailed estimated cost sheets to support the reclamation cost estimate.

The Permittee must update the unit cost data used in the 2011 Midterm Permit Review reclamation cost estimate to 2015 unit costs using the 2015 R.S. Means Heavy Construction Cost Data manual. All computation sheets for demolition, earthwork and re-vegetation must be updated and submitted to the Division so the Division can determine the required bond amount needed through 2020.

The total reclamation cost for the Crandall Canyon Mine (sum of the direct and indirect costs) must be escalated from 2015 to 2020 (5 years) using an escalation factor of 1.2 %. This escalated cost is rounded to the nearest \$ 1,000 to determine the amount of required bond which must be posted with the Division by the Permittee.

In addition to the line item update the Permittee must update relevant Burma Pond and water treatment costs quantities to show the updated operations details as the current MRP operations and bonded amounts do not match current site maintenance activities.

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